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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,532	07/08/2005	Akira Kasuya	0020-5392PUS1	1483
2292 7590 04/28/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
COLE, ELIZABETH M				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
04/28/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/541,532

Applicant(s)

KASUYA ET AL.

Examiner

Elizabeth M. Cole

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 5 and 7-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5, 7-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/5/08 has been entered.

2. Claims 1-2, 5, 7-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites that the reinforcing fibers are thermo-compression and formed into a sheet shape. This limitation is not clear. For purposes of the art rejection, it will be assumed that this means that the reinforcing fibers and the support fibrous member are heated and compressed to form the fabric.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 5, 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroiwa et al, U.S. Patent Application Publication No. 2001/0006866 in view of Nakamura et al, U.S. Patent No. 6,641,763 and Brunner et al, U.S. patent No. 5,452,507. Kuroiwa et al discloses a multiaxial laminated nonwoven fabric comprising layers comprising tows. The tows correspond to the claimed multifilament yarns. The

tows may comprise conjugate fibers having lower melting sheaths and higher melting cores and may be made from polyolefins. See paragraph 0025 and paragraph 0082. The different layers each comprise a plurality of the tows arranged in parallel with each other within each layer. The tows can comprise either the warp or the weft, depending on which layer they are in. See figures. The layers are laid at angles to each other which meets the limitations of claims 12-13. See paragraph 0036. Kuroiwa et al differs from the claimed invention because while Kuroiwa et al teaches employing polyolefins generally, it does not specifically teaches the claimed composite structure of the fibers. Nakamura teaches that it is known to form conjugate fibers having polyolefin as both the sheath and core. See examples. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the particular conjugate fibers of Nakamura in the invention of Kuroiwa et al, motivated by their art recognized suitability for the intended purpose.

5. Kuroiwa et al also differs from the claimed invention because it does not teach the claimed fibers, although it does teach high strength fibers such as aramid fibers and ultra high strength polyethylene fibers can be used in some layers. Brunner et al teaches that carbon, glass, aramid and boron fibers are recognized in the art as equivalent to the high strength polyethylene fibers and aramid fibers disclosed in Kuroiwa. See col. 3, lines 5-16. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the equivalent fibers disclosed by Brunner et al in the material of Kuroiwa, in view of their art recognized equivalence. An express suggestion to substitute one equivalent

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component or process for another is not necessary to render such substitution obvious.

In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

6. With regard to the limitation that the fibers are thermo-compressed to form the sheet shape, Kuroiwa teaches laminating the layers by heat and pressure. See paragraph 0065.

7. Applicant's arguments have been fully considered but are moot in view of the new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

The examiner's supervisor Rena Dye may be reached at (571) 272-3186.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794

e.m.c